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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/558,768

11/30/2005

William H. Amor

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
595 MINER ROAD
CLEVELAND, OH 44143

EXAMINER

VAUGHN, MEGANNE

ART UNIT

PAPER NUMBER

2831

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/558,768	Applicant(s) AMOR ET AL.	
	Examiner MEGANN E. VAUGHN	Art Unit 2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9, 11, 12, 17-24 and 27 is/are rejected.
- 7) ☒ Claim(s) 8, 10, 13-16, 25 and 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>11/30/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-7, 9, 11, 12, 17-24, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Richard et al (US 5550472).

Regarding claims 1, 2, 17, and 27, Richard et al discloses in figures 1 and 2, a magnetic resonance imaging scanner and a method of MRI with said scanner including: a generally cylindrical main magnet assembly (10) that defines a cylinder axis; a first set of shims (66) rigidly positioned inside the main magnet assembly at about a first distance relative to the cylinder axis (see figure); a second set of shims (54) rigidly positioned inside the main magnet assembly at about a second distance relative to the cylinder axis (see figure), the second distance being different from the first distance (see figure, second distance greater than the first distance); a generally cylindrical radio frequency coil (70) arranged inside the main magnet assembly (10) at about a third distance relative to the cylinder axis; and a plurality of gradient coils (32) arranged inside the main magnet assembly at about a fourth distance relative to the cylinder axis (see figure).

Regarding claim 3, Richard et al discloses in figures 1 and 2, that the first distance equals the third distance (column 5, lines 27-28; see figures).

Regarding claim 4, Richard et al discloses in figures 1 and 2 that the first set of shims (66) has a radial symmetry respective to the cylinder axis (see figures).

Regarding claim 5, Richard et al discloses in figure 2 that the first set of shims (66) has a bilateral symmetry respective to a longitudinal symmetry plane that is perpendicular to the cylinder axis (see figure).

Regarding claim 6, Richard et al discloses in figure 2, that the second set of shims (54) is asymmetric about at least one of the cylinder axis and the longitudinal plane of symmetry (see 54 in figure).

Regarding claims 7 and 11, Richard et al discloses in figures 1, 2, and 9 that the first set of shims includes: a generally cylindrical dielectric former (62) (column 5, line 10); packets of magnetic material (66/96) imposed on the generally cylindrical dielectric former; and plastic/epoxy/thermoplastic encapsulation (98) encapsulating the packets of magnetic material (see figure 9).

Regarding claim 9, Richard et al discloses in figures 1, 2, 8, and 9, that the plastic encapsulation (98) includes: a separately molded trays (92) each securing one or more of the packets of magnetic material (66/96) to the generally cylindrical dielectric former (62) (see figure 8).

Regarding claim 12, Richard et al discloses in figures 1 and 2 that the packets of magnetic material each include: one or more steel plates (66) secured together by at least one fastener (column 6, lines 47-49).

Regarding claim 18, Richard et al discloses a magnetic resonance scanner as disclosed above. The method of forming/making a device is not germane to the issue of patentability of the device itself. Therefore, this limitation has not been given patentable weight.

Regarding claim 19-23, Richard et al discloses in figures 1, 2, 8, and 9 that the positioning of the first set of shims (i.e. metal sheets) (66/96) includes: molding a plastic material (98) around the first shims (66/96); and bonding the molded plastic material to a generally cylindrical former (62). The method of forming/making a device (i.e. the use of injection molding or ultrasonically bonding) is not germane to the issue of patentability of the device itself. Therefore, this limitation has not been given patentable weight.

Regarding claim 24, Richard et al discloses in figures 1, 2, 8, and 9 that the molding of a plastic material (98) around the first set of shims (96/66) produces a plurality of moldings each including at least one shim of the first set of shims (see figure 8), and the bonding of the molded plastic material to the generally cylindrical former (62) includes: bonding the moldings at radially spaced-apart positions around the generally cylindrical former (see figure 8).

Allowable Subject Matter

3. Claims 8, 10, 13-16, and 25, and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
4. The following is an examiner's statement of reasons for allowance:

Art Unit: 2831

Claim 8 is allowable over the prior art of record because the prior art of record does not teach or disclose a MRI scanner wherein the plastic encapsulation includes openings through which molding fixtures are removed, in combination with the remaining limitations of the claims.

Claim 10 is allowable over the prior art of record because the prior art of record does not teach or disclose a MRI scanner wherein the plastic encapsulation has a coefficient of thermal expansion $\alpha_{\text{encapsulation}}$ such that $\epsilon_{\text{ult}} \geq (\Delta\alpha \cdot \Delta T) \text{F.S.}$, in combination with the remaining limitations of the claims.

Claims 13 and 26 are allowable over the prior art of record because the prior art of record does not teach or disclose a MRI scanner wherein the steel plates have rounded edges to reduce stress between the steel plates and the plastic encapsulation, in combination with the remaining limitations of the claims.

Claims 14-16 and 25 are allowable over the prior art of record because the prior art of record does not teach or disclose a MRI scanner wherein the radio frequency coil includes: a plurality of rungs arranged generally parallel to the cylinder axis, wherein the packets of magnetic material are disposed at radial positions between the rungs, in combination with the remaining limitations of the claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Brown (US 5701112) and Gebhardt et al (US 6867592).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MEGANN E. VAUGHN whose telephone number is (571)272-8927. The examiner can normally be reached on 8 am- 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MEV
Patent Examiner Art Unit 2831
9/13/2008

/Diego Gutierrez/
Supervisory Patent Examiner,
Art Unit 2831